

<u>Project Areas</u>	<u>Accomplishments</u>	<u>Problems</u>
<u>Projects, Chairmen and Sources</u>	1. Electroslag Technology: remelting and casting for production of large-tonnage products. U.S. Task Force Chairman: M. C. Flemings, MIT Probable location of work: U.S.S.R.: Paton Institute U.S. : MIT, Cabot Corp., Univ. of Buffalo, Amer. Iron & Steel Institute	None evident now. May not be able to fund all tasks. Will seek guidance on patent if and as problems develop.
2. Plasma-arc melting of metallic materials. U.S. Task Force Chairman: R. Wasilewski, NSF Probable location of work: U.S.S.R.: Paton Inst., Baikov Inst., Bardin Inst., Dneprospectstal U.S. : Univ. of Michigan, Stanford Univ., Battelle-Columbus, MIT, Temescal, Allegheny-Ludlum	Same comments as above except specific projects are: High temperature interactions between gases and liquid metals; melting of high nitrogen steels; nitrogen alloying processes; optimization of deformation and thermomechanical processing (total of 5 tasks).	Same as above
3. Electron-beam Evaporation of Metallic and Non-metallic Materials in Vacuum. U.S. Task Force Chairman: R. A. Beall, Bur. of Mines Probable location of work: U.S.S.R.: Paton Inst., Kiev State Univ., All-Union Scientific Research Instrumental Inst. U.S. : UCLA, Temescal, Carnegie-Mellon, Manlabs, Oregon Grad. Center	Same comments as above except specific projects are: Investigation of structural composition of sections and condensates of refractory carbides, borides and oxides; physico-mech. properties, build-up technology and analytical techniques; study of efficiency of coated cutting tools; develop. of diagrams of E.B. production assembly, with preparation and evaluation of experimental models (total of 3 major tasks).	Same as above

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4. Investigation and Development of New Welding Materials. U.S. Task Force Chairman: W. F. Savage, RPI Probable location of work: U.S.S.R.: Paton Inst. U.S. : RPI, Union Carbide Corp., NBS, IITRI, Lehigh Univ.	Same comments as above except specific projects are: Preparation and exchange of selected materials developed on both sides, representing best technology; evaluation by selected tests; development of computational methods for predictive control of weldment properties with exchange of computer programs and materials; exchange and evaluation of cryogenic welding materials (total of approximately 13 tasks).	Same as above
(Evaluation of technological characteristics (such as engineering properties) of materials and products resulting from above work, their quality, reproducibility, reliability, etc. U.S. Task Force Chairman: A. Van Echo, AEC U.S.S.R. Responsible Person: V.I. Kashin, Deputy Dir., Metallurgy Institute	Agreement reached on project per se. Details of cooperation to be worked out between Van Echo and Kashin. It is to be noted that some evaluation tasks are already listed under above projects, so that this Task Force essentially will coordinate work and fill any gaps.	None
6. Solid-state joining of materials--the investigation of diffusion processes, surface composition and structure, adhesion, and mathematical modelling of the processes involved.	Details of cooperation to be determined by specialist groups.	Project should be approved by the Joint Commission.